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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/678,692 | 10/03/2003 | David R. Rich | 02-20 | 9961 |

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| EXAMINER | |
|---|---|
| FRANK, RODNEY T | |
| **ART UNIT** | **PAPER NUMBER** |
| 2856 | |

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/678,692 | RICH, DAVID R. | |
| | Examiner | Art Unit | |
| | Rodney T. Frank | 2856 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-21 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 31 December 2003.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: On page 7, paragraph 31, the identifier "30" is disclosed to be both a sample collection portion and a sample chamber. The examiner feels that the sample chamber is 30 and the collection portion is 14.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokono et al. (U.S. Patent Number 5,221,474; hereinafter referred to as Yokono). Yokono discloses a transfusion filtering device for preventing foreign matters from entering into a human body. This transfusion fiber comprises a cylindrical housing, hydrophilic porous hollow fibers disposed in the housing in parallel with the axis of the housing, and hydrophobic porous hollow fibers disposed in the housing along the inner wall of the housing, the upper ends of the hydrophobic porous hollow fibers being exposed to the outer atmosphere so as to discharge air accumulated in the housing (Please see the abstract).

In regard to claims in general, the assembly described is disclosed by Yokono with the difference being that the hydrophobic fibers or not disposed in the termination block, rather an array of hydrophilic hallow fibers are in the sealing block. However, by their nature, hydrophilic

fibers absorb water while hydrophobic fibers don't. Since the primary use of this device is to filter and treat a liquid, it uses the hydrophilic fibers to do so. However, Yokono also discloses that it uses the hallow hydrophobic fibers to filter any gas out of the system (see column 4, lines 20-37). Therefore, it is the opinion of the examiner that in order to form a system whereby a gas would be filtered, one would be able to easily take the teaching of Yokono and modify the hydrophilic fibers and replace them with the hydrophobic fibers, thus obtaining the system as described in the claims. Since Yokono already discloses the use of the hydrophobic fibers as a means to filter a gas fro ma system, this replacement would not be seen as hindsight, but rather as a natural extension of the device disclosed.

In regard to claim 1, Yokono discloses and shows in reference to figure 1, an assembly comprising a filter portion (1) including a substantially tubular housing (2) having an upstream first end and a downstream second end; a sample collection portion including a body section having a sample chamber defined therein (26), wherein the body section is coupled to the downstream second end of the housing such that the housing and the body section define a unitary assembly, a termination block (31) positioned in the body section of the sample chamber so as to form a seal across an upstream end region of the sample collection portion; and at least one hollow porous fiber element disposed within the housing (32), the fiber element having an upstream closed end and a downstream open end, wherein the upstream closed end is positioned proximate the upstream first end of the housing, and wherein the downstream open end is coupled to the termination block.

In regard to claim 12, Yokono discloses and shows in reference to figure 1, a monitoring system comprising a sampling line having a first end adapted to be connected to a patient circuit and a second end for carrying a flow of gas from a patient circuit; (see column 1 lines 10-68) a gas

sampling assembly comprising a filter portion (1) including a substantially tubular housing (2) having an upstream first end and a downstream second end; a sample collection portion including a body section having a sample chamber defined therein (26), wherein the body section is coupled to the downstream second end of the housing such that the housing and the body section define a unitary assembly, a termination block (31) positioned in the body section of the sample chamber so as to form a seal across an upstream end region of the sample collection portion; and at least one hollow porous fiber element disposed within the housing (32), the fiber element having an upstream closed end and a downstream open end, wherein the upstream closed end is positioned proximate the upstream first end of the housing, and wherein the downstream open end is coupled to the termination block.

In regard to claims 2 and 13, though the fiber(s) is (are) not disclosed as being formed by looping the fiber back upon itself, this is seen by the examiner as a mere design choice of the applicant since this feature does not cause any unexpected result nor give any improvement of the prior art.

In regard to claim 3, a sample line (33) is coupled to an upstream first end of the housing.

In regard to claim 4 and 14, there is a conduit (34) to communicate a sampled material out of chamber 26.

In regard to claims 5 and 15, the housing and body are formed of a unitary material.

In regard to claims 6 and 16, Yokono discloses the assembly of claim 1, wherein the body section includes a sample collection chamber defined in the body section upstream of the sample chamber and downstream of the termination block, the sample collection portion configured to collect filtered materials therein; and a conduit defined in the body section upstream of the sample

chamber and downstream of the sample collection chamber, the conduit communicating the gas sample collection chamber with the sample chamber as seen in figure 1.

In regard to claims 7 and 17, though Yokono does not disclose any of the fibers being disposed with an end protruding from the terminating block, this is seen by the examiner as a mere design choice of the applicant since this feature does not cause any unexpected result nor give any improvement of the prior art.

In regard to claims 8 and 18 the filtering fibers are shown to terminate in the sealing block.

In regard to claims 9 and 19, the sampling assembly of claim 1, wherein the housing includes a fiber chamber defined therein in which at least the upstream closed ends of the fiber elements are located, wherein the body section includes a conduit communicating the sample chamber with a downstream end of the termination block, and wherein a diameter of the fiber chamber and a diameter of the conduit are substantially the same is shown in figure 1.

In regard to claims 10 and 20, the sampling assembly of claim 1, wherein a plurality of hallow porous fiber elements are coupled to the termination block such that the downstream open ends of the fiber elements are disposed in a linear array is shown in figure 1.

In regard to claims 11 and 21, the fiber elements are disclosed to be hallow in column 4 lines 20-61.

***Conclusion***

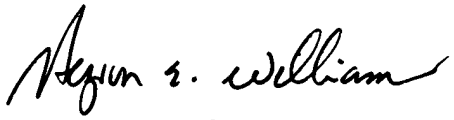
4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The examiner has cited various references that are viewed as relevant state of the art pertinent to the present application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney T. Frank whose telephone number is (571) 272-2193. The examiner can normally be reached on M-F 9am -5:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RTF
July 25, 2004



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